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<u>Summary of Initial Missions</u>

In the period from 20 June to 10 July 1956 the Soviet Bloc air defense system was subjected to eight penetrations of an unprecedented nature, seven occurring within a period of only eight days. It must be remembered that COMINT provides the only basis of judging the performance of the Soviet system. This is important because it is clear from REGAL material that considerable air defense business is conducted over landlines and thus not observed by COMINT. However, some tentative conclusions may be drawn from these initial flights and these are indicated as follows:

1. In spite of the fact that these missions come as a surprise, none of them went undetected. This is clear evidence that their radar coverage extends above 72,000 feet.

2. By 5 July 1956, the fourth flight, the USSR was aware of the purpose of the missions and were taking counter action. One positive action was the standdown of civil flights while the mission aircraft was over the USSR, and a second action which is believed related is the moving of MIG-19 aircraft into East Germany and Poland on 7 July 1956. Also MIG-19's were moved into Hungary at about this time.

3. The performance of the Soviet system on the 5 July mission, 2014, was indeed curious. While the action evident from COMINT is not clear an explanation which appears to fit the known facts is offered as follows: As a result of the previous missions, the Soviets had concluded the essential facts concerning the missions, i.e., that they were for reconnaissance, that they flew above 65,000 feet, and that a penetration as deep as Moscow was possible. They probably surmised that the 5 July mission was headed for Moscow when the track appeared on a northeasterly heading. The loss of the target when it entered Soviet territory was probably deliberate and the "red herring" track returning to the west was either a dodge or a convenience to avoid broadcasting a track for all the system to see that a "hostile or intruder" was coming over Moscow with no means available to stop it. This idea is supported by the use of a raid number assigned in the region just beyond the point where the track had been "lost". In addition, the track was not labeled "hostile or intruder" when it was broadcast after it had passed beyond Moscow. The reporting of the track when it did appear was only by Moscow and it has been suggested that other stations had been instructed not to broadcast the track. Further, it may or may not be a coincidence that the height broadcast was almost exactly half of the true altitude of the mission aircraft, but on the next missions, four days later, the altitude reporting was consistently above 50,000 feet.

4. By 9 July 1956, in addition to the evident recognition of the great height of the mission flights, tracking was better and in general the performance of the warning system was much improved.

5. The next day, 10 July 1956, the Soviet air defense warning system closed a 3000 mile track with only two short periods of confusion or track loss. Altitude reporting was over 60,000 feet with one plot passed 68,800 which was only 100 feet off target.

6. The first eight missions proved that the air defense warning system is deployed in depth. This was evident from both the continuity of track and most forcefully from the ELINT data collected. Some 1461 intercepts of Soviet Bloc radars operating in the 3000 mc/s band were obtained by project ELINT as follows: TOKEN-1331, WHIFF-37, GAGE-26, PATTY CAKE-37, Other 30. These numbers cannot be equated to individual radar sets since the same radar may be intercepted more than once. 618 TOKEN sites were located, including 213 new sites. Some 343 additional TOKEN signals were identified but available information does not permit determination of location so that it must be concluded that these signals include both known and new sites. Because of the limitation of ELINT to the 3000 mc/s band and the Soviet practice of collocating radars on different frequencies the total number of radars may be expected to be at least double the number of sites.

7. Confusion and track loss seemed to be related to the presence of large numbers of fighters although the saturation point has not been determined because of insufficient data.

8. The question of radars for height finding, the capabilities of TOKEN in this role, the introduction of ROCK CAKEs and later developments are discussed in another section. It is believed, however, that these missions were a catalyst in the introduction of ROCK CAKEs.